

ECONOMIC IMPACT OF THE TOURISM INDUSTRY IN DULUTH

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**BUREAU OF BUSINESS AND
ECONOMIC RESEARCH**

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The BBER was asked to supply an economic impact analysis only. This analysis does not consider the social or environmental impacts of the tourism industry and should not be viewed as a cost benefit analysis or environmental impact assessment.

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I. Project Description

The UMD Labovitz School of Business and Economics' research bureau, the Bureau of Business and Economic Research (BBER), was asked to study and estimate the economic impact of the tourism industry in Duluth. The study area used in the analysis includes all Duluth zip codes.¹

The research objectives of this study included the following:

- Show current size of Duluth's tourism industry in terms of employment and value added.
- Show recent trends in employment for the tourism industry.
- Model economic impacts of 0.5%, 2%, and 4% increases in the Duluth tourism industry.

II. Inputs

The following section describes the inputs required for modeling the impacts of increases in the tourism industry. Inputs for the model were gathered from IMPLAN's 2018 database, which includes estimates of employment, labor income, value added, and output for 536 unique industries in the region. Table 1 shows the 21 tourism-related industries included in the study along with the number of jobs and value added for each industry. As shown in the table, Duluth's tourism industry directly contributed more than 16,000 jobs to the city of Duluth's economy, and added more than \$1.1 billion in value added spending to the city's gross regional product (GRP).

Table 1. Tourism Industries Included in Study (2018)

<i>Sector</i>	<i>Employment²</i>	<i>Value Added (Millions)</i>
Full-service restaurants	3,531	\$215.5
Limited-service restaurants	1,752	\$128.8
Retail - General merchandise stores	1,335	\$90.9
Retail - Food and beverage stores	1,061	\$82.3
Hotels and motels, including casino hotels	854	\$82.0
All other food and drinking places	1,552	\$78.7
Automotive repair and maintenance, except car washes	792	\$76.6
Car washes	644	\$72.1
Retail - Clothing and clothing accessories stores	744	\$60.3
Retail - Health and personal care stores	645	\$55.9
Retail - Gasoline stores	510	\$55.8
Retail - Miscellaneous store retailers	1,007	\$46.5
Breweries	85	\$35.6
Retail - Sporting goods, hobby, musical instrument and bookstores	554	\$30.8
Other amusement and recreation industries	423	\$21.2

¹ Duluth zip codes include 55801, 55802, 55803, 55804, 55805, 55806, 55807, 55808, 55810, 55811, 55812, 55814, 55815, and 55816.

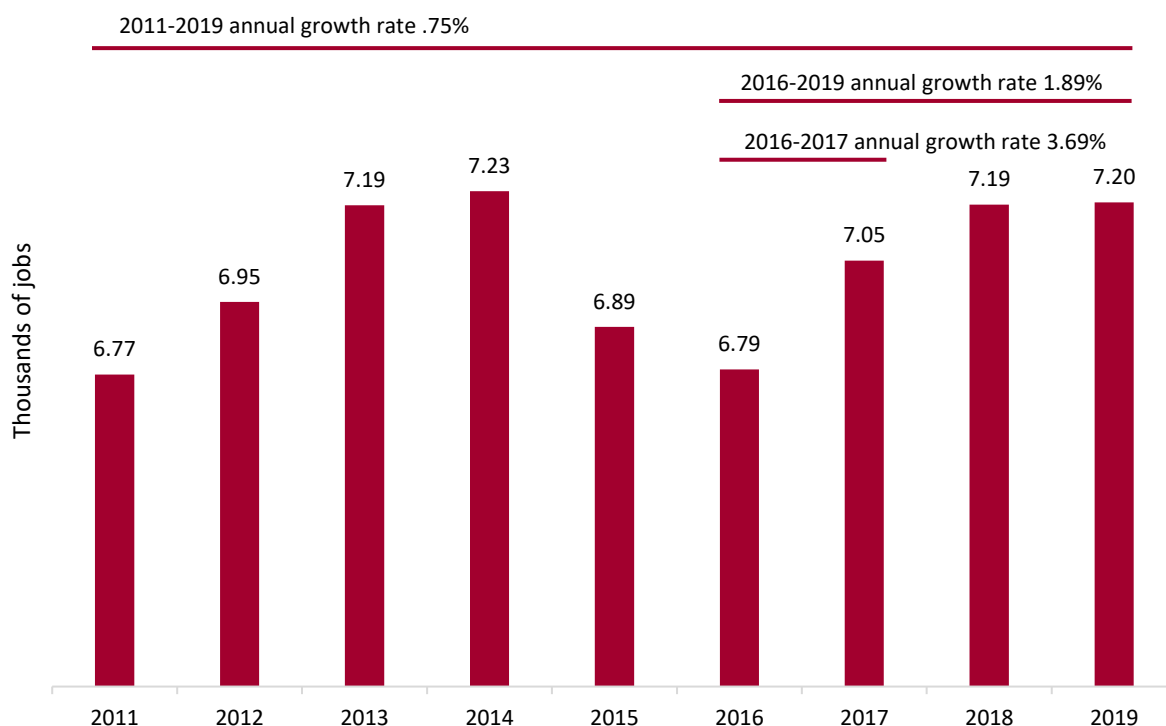
² Employment is in terms of jobs, not full-time equivalent (FTE).

Distilleries	15	\$14.1
Commercial sports except racing	236	\$13.5
Independent artists, writers, and performers	451	\$6.7
Amusement parks and arcades	30	\$2.9
Wineries	6	\$1.5
Total	16,227	\$1,157.6

SOURCE: IMPLAN

Figure 1 shows employment in the leisure and hospitality industry, as measured by the Quarterly Census of Employment and Wages (QCEW). As shown in the figure, employment grew from roughly 6,770 in 2011 to 7,200 in 2019.

Figure 1. Employment in Duluth Tourism Industry 2011-2019 (in thousands)



SOURCE: QUARTERLY CENSUS OF EMPLOYMENT AND WAGES (QCEW)

Using employment data from the QCEW, the research team evaluated recent trends in employment growth to determine realistic growth rates to use in modeling. For example, between 2011 and 2019 employment in the tourism industry grew by roughly 6.0% (0.75% annualized). In the most recent three years (2016-2019), employment grew by roughly 5.7% (1.9% annualized). During the eight-year period, the highest one-year growth rate (3.7%) occurred between 2016 and 2017. Therefore, the research team assumed growth rates of 0.5%, 2%, and 4% as conservative, moderate, and best-case scenarios, respectively.

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III. Findings

This section provides the positive economic impacts for three scenarios: 0.5%, 2%, and 4% growth in the size of the tourism industry in Duluth, MN. Inversely, the scenarios could also represent 0.5%, 2%, and 4% decreases in the size of tourism industry and the values could be interpreted as negative impacts. Results represent impacts for the city of Duluth and are shown in 2020 dollars. Results are measured in employment, output, labor income, and value added.

Table 2. Economic impacts of a 0.5% increase in tourism expenditure (in millions)

<i>Impact Type</i>	<i>Employment</i>	<i>Labor Income</i>	<i>Value Added</i>	<i>Output</i>
Direct Effect	61	\$1.7	\$2.5	\$4.5
Indirect Effect	8	\$0.4	\$0.5	\$1.2
Induced Effect	9	\$0.4	\$0.7	\$1.3
Total Effect	78	\$2.4	\$3.7	\$7.0
Multiplier	1.28	1.46	1.50	1.54

Source: IMPLAN

Scenario 1 illustrates the economic impacts of a 0.5% increase in the tourism industry of Duluth. Total effects are broken into the three components of direct, indirect, and induced. Direct effects represent the employment and spending coming from the tourism industry itself. Indirect effects measure increased inter-industry spending, while induced effects reflect an increase in household spending.

A 0.5% increase would add 78 jobs, 61 directly to the tourism industry and 17 jobs to other industries. In this scenario, the employment multiplier is 1.28, meaning that for every 1 job added in the tourism industry there will be 0.28 jobs added in other industries. A 0.5% increase will generate an additional \$1.7 million of labor income within the tourism industry and an additional \$0.8 million in external industries. Labor income has a multiplier of 1.46 meaning for every one dollar of labor income generated in the tourism industry there in-turn will be \$0.46 of labor income in outside industries. A 0.5% increase in the tourism industry will add \$2.5 million in value directly from tourism, and \$1.2 million of value to other industries. The multiplier for value added is 1.5 meaning for every \$1.00 of value added for the tourism industry \$0.50 of value is added to other industries. A 0.5% increase in Duluth's tourism industry results in \$4.5 million in additional output specific to the tourism industry and \$2.5 million of output in other industries.

Table 3. Economic impacts of a 2% increase in tourism expenditure (in millions)

<i>Impact Type</i>	<i>Employment</i>	<i>Labor Income*</i>	<i>Value Added*</i>	<i>Output*</i>
Direct Effect	244	\$6.6	\$9.9	\$18.1
Indirect Effect	32	\$1.4	\$2.1	\$4.7
Induced Effect	37	\$1.6	\$2.8	\$5.0
Total Effect	313	\$9.6	\$14.8	\$27.9
Multiplier	1.28	1.46	1.50	1.54

Source: IMPLAN

Scenario 2 illustrates the economic impacts of a 2% increase in the tourism industry of Duluth. A 2% increase would add 78 jobs, \$9.6 million in labor income, \$14.8 million in value added spending, and \$27.9 in total output to the city's economy.

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Table 4. Economic impacts of a 4% increase in tourism expenditure (in millions)

<i>Impact Type</i>	<i>Employment</i>	<i>Labor Income*</i>	<i>Value Added*</i>	<i>Output*</i>
Direct Effect	488	\$13.2	\$19.7	\$36.2
Indirect Effect	65	\$2.8	\$4.2	\$9.4
Induced Effect	74	\$3.2	\$5.6	\$10.1
Total Effect	627	\$19.2	\$29.5	\$55.7
Multiplier	1.28	1.46	1.50	1.54

Source: IMPLAN

Finally, Scenario 3 illustrates the marginal impacts of a 4% increase in the tourism industry of Duluth (Table 5). A 4% increase would add 627 jobs, \$19.2 million of labor income, \$29.5 million in value added, and \$55.7 million in additional output to the city's economy.